



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,005	04/27/2001	Joong-Je Park	11154-003001	1635
26161	7590	02/17/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022				VAN HANDEL, MICHAEL P
ART UNIT		PAPER NUMBER		
2617				

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/844,005	PARK ET AL.
	Examiner	Art Unit
	Michael Van Handel	2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) Claim(s) 5, 8 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. ____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: ____.

DETAILED ACTION

Response to Amendment

1. This action is responsive to an Amendment filed 12/22/2005. Claims 1-8 are pending. Claims 1-6 are amended. Claim 9 is cancelled. The examiner hereby withdraws the objection to the specification in light of the amendment.

Response to Arguments

2. Applicant's arguments filed 12/22/2005 with respect to claims 1, 3, 4, 6, and 7 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed 12/22/2005 with respect to claims 1, 3, 4, 6, and 7 have been fully considered but they are not persuasive.

Referring to claim 1, the applicant argues that Chaney does not teach a signal output unit with a plurality of dedicated demultiplexers, demodulators, and output paths corresponding to each of the tuners. The examiner respectfully disagrees. Chaney discloses two separate tuners to receive two separate television components (col. 16, l. 23-37). The tuners have two separate transport units (demultiplexers) 120, 121 (col. 4, l. 51-67 & col. 5, l. 51-65) for detecting and separating various types of data in the tuned signals (Fig. 12). The examiner notes that these transport units read on the limitation "a plurality of dedicated demultiplexers." The signals are then multiplexed together in multiplexer 127 and descrambled by the smart cards. After being descrambled by the smart cards, the components are demultiplexed into separate components again (col. 15, l. 43-47), and processed as described with regard to Fig. 11. Specifically, Chaney

states that the first and second processed signal components are decompressed in decompressor units 140 and 1405, respectively, and are further processed in signal processors 150 and 1505, respectively (col. 15, l. 47-50). Chaney further discloses that the output of a signal processor is suitable for display on a display device (col. 6, l. 30-34). Therefore, the examiner interprets the signal processors 150, 1505 of Fig. 12 as representing output paths. The examiner notes that the transport, descrambling, decompressing, and signal processing units correspond to the two separate tuners of Fig. 12, and therefore read on the limitation “dedicated demultiplexers, demodulators, and output paths.”

Allowable Subject Matter

4. Claims 5, 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Nakagawa et al.

Referring to claim 1, Chaney discloses a satellite broadcasting receiver (video signal processing system)(col. 3, l. 53-60)(Figs. 1, 12) for receiving scrambled or unscrambled digital satellite broadcasting signals (col. 8, l. 58-65), demultiplexing the signals (col. 5, l. 61-63)(Fig. 1), decoding the signals and outputting audio and video signals (col. 6, l. 17-34)(Fig. 1), a multichannel signal receiver (col. 12, l. 28-51)(Figs. 9-12) comprising:

- a descrambler 180, 1805 including a plurality of descrambling units for descrambling the scrambled digital satellite broadcasting signals (col. 12, l. 28-52)(Figs. 9-12);
- a signal receiver including a plurality of tuners (Figs. 1, 12) for receiving multiple digital satellite broadcasting signals, and outputting the digital satellite broadcasting signals (col. 16, l. 9-37)(Figs. 11, 12);
- a signal output unit 140, 1405, 150, 1505 for demultiplexing (decompressing) multiple digital satellite broadcasting signals (Fig. 12), demodulating the signals, and outputting audio (Fig. 1) and video signals, with a plurality of dedicated demultiplexers, demodulators, and output paths corresponding to each of the plurality of tuners 140, 1405, 150, 1505;
- a common interface controller 183 (security controller) for checking whether each of the multiple digital satellite broadcasting signals provided by the signal receiver is a paid signal or a free signal, outputting the digital satellite broadcasting signal to the signal output unit when the digital satellite broadcasting signal is a free signal (the examiner notes that in television broadcasting a paid signal relates to a scrambled signal and a free signal relates to an unscrambled signal), and outputting the digital satellite broadcasting signal to the descrambler and outputting a descrambled digital

satellite broadcasting signal to the signal output unit when the digital satellite broadcasting signal is a paid signal (col. 8, l. 58-65)(Figs. 1, 4); and

- a host central processing unit (CPU) 160 (microcontroller) for controlling the signal receiver (col. 4, l. 33-40), the common interface controller (col. 5, l. 58-60)(col. 6, l. 8-13, 59-62)(col. 9, l. 17-36)(col. 10, l. 10-26)(col. 12, l. 17-27) and the signal output unit (Fig. 1).

Chaney does not disclose that the satellite broadcasting signals are received via multiple antennas. Nakagawa et al. discloses a system for receiving broadcast signal, comprising a plurality of antennas (col. 1, l. 39-43). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Chaney to receive satellite signals from multiple antennas, such as that taught by Nakagawa et al. in order to allow a receiver to catch radio waves transmitted from differently positioned satellites (col. 1, l. 14-20).

Referring to claim 2, Chaney discloses the receiver of claim 1, wherein at least some of the paid signals are scrambled (col. 8, l. 58-62).

Referring to claim 3, Chaney discloses the receiver of claim 1, wherein the descrambling process is coordinated by a common interface module (col. 8, l. 58-66)(Fig. 1).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Nakagawa et al. and further in view of Christine et al.

Referring to claim 4, the combination of Chaney and Nakagawa et al. teaches the receiver of claim 1, wherein the common interface controller comprises:

- a transport stream interface for receiving multiple digital satellite broadcasting signals from the signal receiver, checking whether each of the digital satellite broadcasting signals is a paid broadcasting signal, supplying the checked paid broadcasting signal to the descrambler, controlling the descrambling process, and outputting the descrambled broadcasting signal provided by the descrambler to the signal output unit (Chaney col. 16, l. 23-37)(Chaney Fig. 12); and
- a host interface for controlling multiple common interface modules of the descrambler according to the control of the host CPU (Chaney col. 15, l. 21-41)(Chaney Figs. 9, 11).

The combination of Chaney et al. and Nakagawa et al. does not teach an inter integrated circuit (I²C) interface for controlling the host interface and the transport stream interface according to the control of the host CPU. Christine et al. discloses the use of a Phillips Inter-Integrated-Circuit Control (I²C) interface that is dedicated to the transmission and reception of command, status messages and video data between a host and a video decoder (col. 4, l. 24-38)(Fig. 1). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Chaney and Nakagawa et al. to include an I²C interface, such as that taught by Christine et al. in order to provide an interface and communication protocol for allowing a host to control and communicate with other receiver components (col. 2, l. 1-5).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Chaney in view of Nakagawa et al. and further in view of Cowe.

Referring to claim 6, the combination of Chaney and Nakagawa et al. teaches a satellite broadcasting signal receiving method (video signal processing method)(Chaney col. 3, l. 53-60)(Chaney Figs. 1, 12) for receiving scrambled or unscrambled digital satellite broadcasting signals (Chaney col. 8, l. 58-65), demultiplexing the signals (Chaney col. 5, l. 61-63)(Chaney Fig. 1), decoding the signals and outputting audio and video signals (Chaney col. 6, l. 17-34)(Chaney Fig. 1), with a method for controlling a multichannel signal receiver (Chaney col. 12, l. 28-51)(Chaney Figs. 9-12) comprising:

- selecting multiple receiving channels of digital satellite broadcasting signals according to a driving of the receiver (Chaney col. 4, l. 33-40)(Chaney Fig. 1);
- checking whether the broadcasting signal is a paid signal when the broadcasting signal is received (Chaney col. 8, l. 58-65)(Chaney Figs. 1, 4);
- demultiplexing the corresponding broadcasting signal, decoding the signal and outputting the signal through the receiving channel's dedicated demultiplexer, decoder, and output path when the received broadcasting signal is that of a free broadcast (the examiner notes that in television broadcasting a free signal relates to an unscrambled signal)(Chaney col. 6, l. 17-34)(Chaney col. 8, l. 58-65)(Chaney col. 15, l. 43-47)(Chaney Figs. 1, 11); and
- descrambling the corresponding broadcasting signal, demultiplexing the descrambled broadcasting signal and decoding the same and outputting the signal through the receiving channel's dedicated demultiplexer, decoder, and output path when the received broadcasting signal is that of a paid broadcast (the examiner notes that in

television broadcasting a paid signal relates to a scrambled signal)(Chaney col. 5, l. 58-63)(Chaney col. 6, l. 17-34)(Chaney col. 8, l. 9-12)(Chaney Figs. 1, 4).

The combination of Chaney and Nakagawa et al. does not teach that the method comprise checking a receipt state of a broadcasting signal of the selected broadcasting signals, and outputting a warning message that no signal is received when the broadcasting signal is not received. Cowe discloses the method of sensing the presence of a video carrier signal on any one or more channels. If a microprocessor reports that no signal is present, a substitute default video text message can be automatically inserted stating “Please Stand By. Normal programming will resume as soon as possible (col. 14, l. 35-43).” It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Chaney and Nakagawa et al. to include a method of sensing the loss of a video carrier signal and outputting a corresponding message to the user, such as that taught by Cowe in order to alert the user of a television system problem.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaney in view of Nakagawa et al. and Cowe, and further in view of Furuya et al.

Referring to claim 7, the combination of Chaney, Nakagawa et al., and Cowe teaches a method of descrambling, demultiplexing, and decoding a received paid broadcasting signal)(Chaney col. 5, l. 58-63)(Chaney col. 6, l. 17-34)(Chaney col. 8, l. 9-12)(Chaney Figs. 1, 4) comprising:

- checking whether a descrambler for descrambling the scrambled broadcasting signal is provided (Chaney col. 12, l. 58-65)(Chaney col. 13, l. 32-46)(Chaney col. 14, l. 2-10)(Chaney Fig. 9); and
- descrambling the broadcasting signal, demultiplexing the signal, demodulating the signal and outputting the signal when the descrambler is provided (Chaney col. 5, l. 58-63)(Chaney col. 6, l. 17-34)(Chaney col. 8, l. 9-12)(Chaney col. 13, l. 44-46)(Chaney Figs. 1, 4);

The combination of Chaney, Nakagawa et al., and Cowe does not teach displaying a message that no smart card for descrambling the broadcasting signal is provided when the descrambler is not provided in. Furuya et al. discloses a method for displaying a message, typically stating: “Insert a card” on a screen when an IC card has not been mounted on the card-reader employed in the IRD (col. 10, l. 30-34)(Figs. 3A, 10). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Chaney, Nakagawa et al., and Cowe to include a method of displaying a missing card notification, such as that taught by Furuya et al. in order to alert the user of a missing security module.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Van Handel whose telephone number is 571.272.5968. The examiner can normally be reached on Monday-Friday, 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571.272.7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Van Handel
Examiner
Art Unit 2617

MVH



VIVEK SRIVASTAVA
PRIMARY EXAMINER